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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/582,198	06/09/2006	Yang Shen	0002860USU/4137	3977

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EXAMINER

FULTON, KRISTINA ROSE

ART UNIT	PAPER NUMBER
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3673

MAIL DATE	DELIVERY MODE
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12/22/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of Allowability

Application No.

10/582,198

Examiner

KRISTINA R. FULTON

Applicant(s)

SHEN, YANG

Art Unit

3673

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendments filed 9/11/09.
2. ☒ The allowed claim(s) is/are 7-11 and 13-27.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some* c) ☐ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Carol McKeever on 12/17/09.

The application has been amended as follows:

Claim 7 should read: A key-changeable lock, comprising, in combination:

(a) a lock housing,

(b) a lock cylinder for rotation within the lock housing about a rotational axis, the lock cylinder including,

(i) a locking block slidably mounted on a periphery of locking cylinder, and having a first working position and a second working position, wherein the locking block extends from the lock cylinder to engage the lock housing, thereby directly preventing rotation of the lock cylinder relative the lock housing in the first working position, and wherein the locking block at least partially retracts into the lock cylinder to allow rotation in the second working position,

(ii) a toothed piece with a block groove, wherein the toothed piece is movable to allow or block retraction of the locking block into the lock cylinder and the toothed piece is positioned entirely within the lock cylinder in both the first and second working positions,

(iii) a toothed slide that moves in the lock cylinder transverse to the rotational axis, the toothed slide having an engaged and disengaged positions with the toothed piece, the toothed piece moves in a fixed relationship with the toothed slide when in the engaged position, and in an independent relationship when in the disengaged position,

(iv) a sliding block that moves the toothed slide between the engaged and

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disengaged positions, wherein the sliding block is moved by the locking block via pins extending between the locking block and sliding block, and

(v) a locking hole provided on or in the lock cylinder and into which a key is inserted, wherein insertion of a first key into the locking hole moves the toothed slide and in turn the toothed piece into the engaged position, so that the block groove allows retraction of the locking block into the lock cylinder, wherein rotation of the first key in turn rotates the lock cylinder, the locking block retracts into the lock cylinder sliding into the blocking groove, wherein retraction of the locking block into the lock cylinder,

(i) prevents the toothed piece from moving with respect to the locking block, and

(ii) slides the sliding block linearly in a direction perpendicular to the rotational axis to disengage the toothed slide from the toothed piece, and wherein removal of the first key and insertion of a second key moves the toothed slide to establish a new engaged position between the toothed slide and the toothed piece, so that the second key now locks and unlocks the key changeable lock.

Cancel claim 12 as it is now in claim 7.

Claim 22 should read: A key-changeable lock, comprising, in combination:

a lock housing; and

a lock cylinder rotatable about a rotational axis within the lock housing, the lock cylinder includes a shell for the lock cylinder, a locking hole on the shell into which a key is inserted, and a locking block is slidably mounted on the shell between a first working position and a second working position;

a sliding block slidable in the shell linearly in a direction perpendicular to the rotational axis free of the lock housing, wherein the locking block abuts against a pin fixed within the sliding block and moves the sliding block via the pin, and

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a toothed slide slidable in the sliding block, and a toothed piece having a block groove, wherein the toothed piece is slidably disposed in the shell and positioned entirely within the cylinder in both the first and second working positions, and

wherein the locking block is not held in the block groove, the locking block extends from the lock cylinder to engage the lock housing thereby directly preventing rotation of the lock cylinder relative to the lock housing and the toothed piece engages the toothed slide when the locking block is in the first working position, and

wherein the locking block is held in the block groove and at least partially retracts into the lock cylinder to allow relative rotation of the lock cylinder with respect to the lock housing, and the toothed piece disengages the toothed slide when the locking block is in the second working position.

Allowable Subject Matter

2. The following is an examiner's statement of reasons for allowance: Applicant's concept of a toothed piece movable within a lock cylinder and completely positioned within the cylinder in both working positions where a sliding block is moved by the locking block by pins between the locking block and sliding block is novel over the available prior art. The examiner can find no reason to combine references of record to create applicant's invention without the use of hindsight.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KRISTINA R. FULTON whose telephone number is (571)272-7376. The examiner can normally be reached on M-TH 7-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Cuomo can be reached on 571-272-6856. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter M. Cuomo/

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Supervisory Patent Examiner, Art Unit 3673

/K. R. F./

Examiner, Art Unit 3673

12/17/09